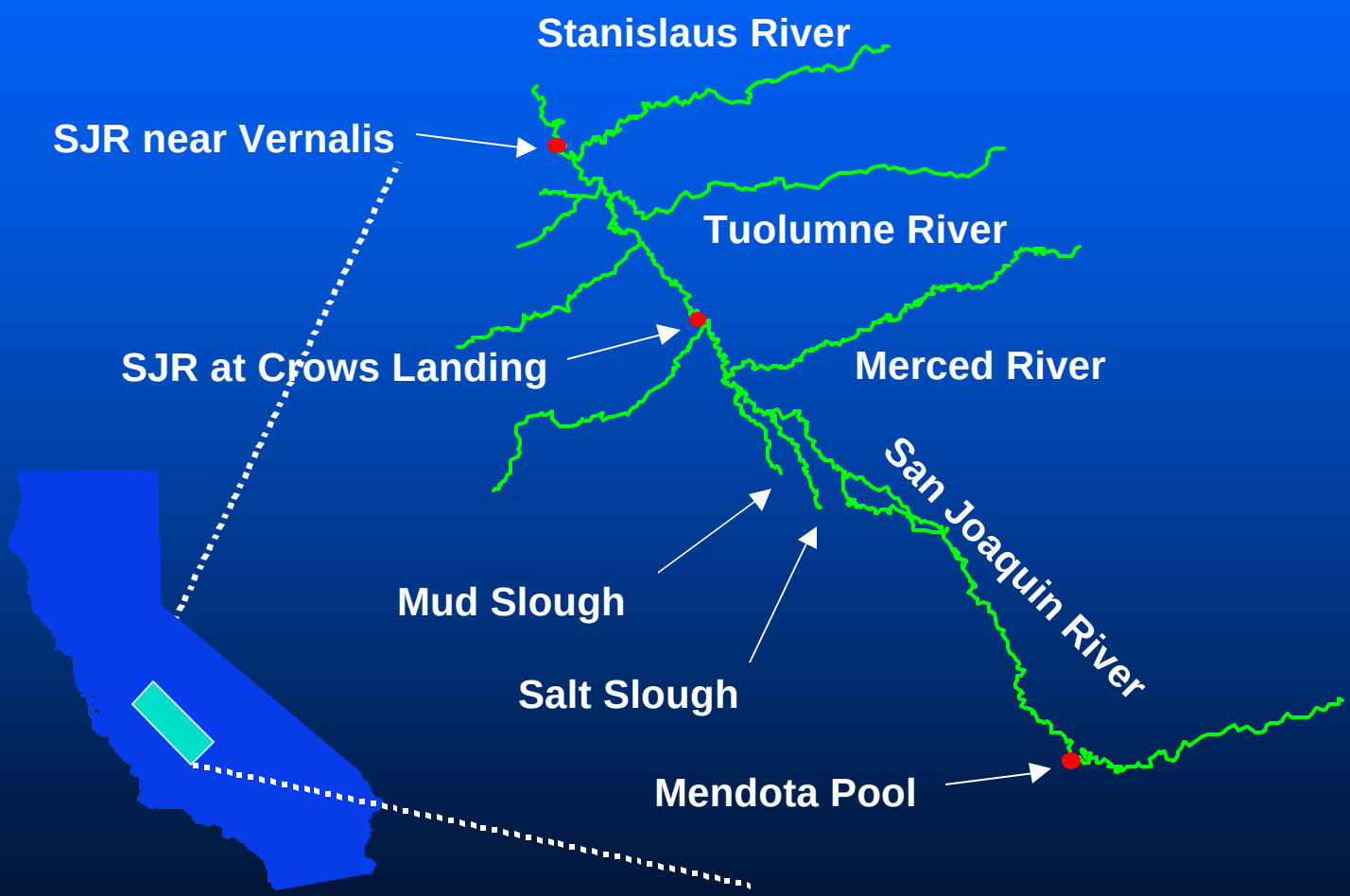
Highlights of Alternative Water Quality Objectives and Proposed Implementation Program

San Joaquin River
Basin Plan Amendment Addressing
Salinity and Boron

Lower San Joaquin River Basin



Components of the Water Quality Control Plan (Basin Plan)

- Beneficial Uses
- Water Quality Objectives
- Implementation Program

Beneficial Uses

- Municipal and Domestic Supply
- Irrigation Water Supply
- Spawning, Reproduction, and/or Early Development
- Stock Watering
- Industrial Process Supply
- Recreation
- Freshwater Habitat
- Migration
- Wildlife

Alternative Water Quality Objectives in Draft Staff Report

Salinity

- No Action
- Full Protection
- Delta Export

Boron

- No Action
- Full Protection

Salinity
No Action Alternative
EC (micromhos/cm)

State Board Vernalis Objective:

April through August	**700**
September through March	**1,000**

Secondary Drinking Water MCL:

Recommended	**900**
Upper Level	**1,600**

Salinity
Full Protection Alternative
EC (micromhos/cm)

State Board Vernalis Objective:

April through August	**700**
September through March	**1,000**

Mendota Dam to Vernalis

April through August	**700**
September through March	**900**

Salinity
Delta Export Alternative
EC (micromhos/cm)

State Board Vernalis Objective:

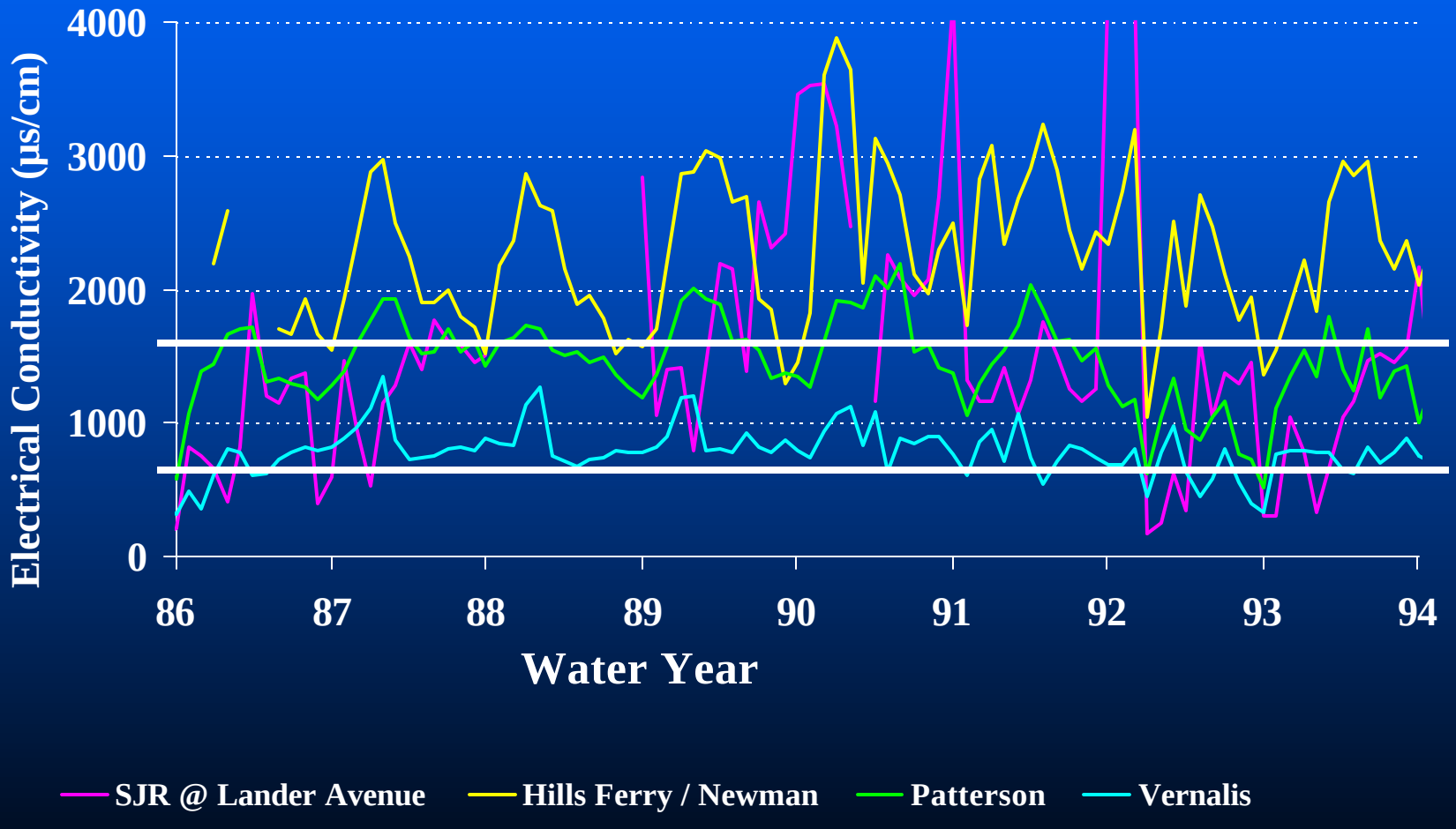
April through August	**700**
September through March	**1,000**

Mendota Dam to Vernalis

Year Around	**1,000**

San Joaquin River Electrical Conductivity

1986-1994



No Action Alternative
Boron (mg/L)

Location Season	Mean Monthly Objective (mg/L)	
Sack Dam to Merced River:		
15 March to 15 September	2.0	(or 5.8 maximum)
Merced River to Vernalis		
15 March to 15 September	0.8	(or 2.0 maximum)
16 September to 14 March	1.0	(or 2.6 maximum)
Critical Year / Year Around	1.3	

Full Protection Alternative for Boron (mg/L)

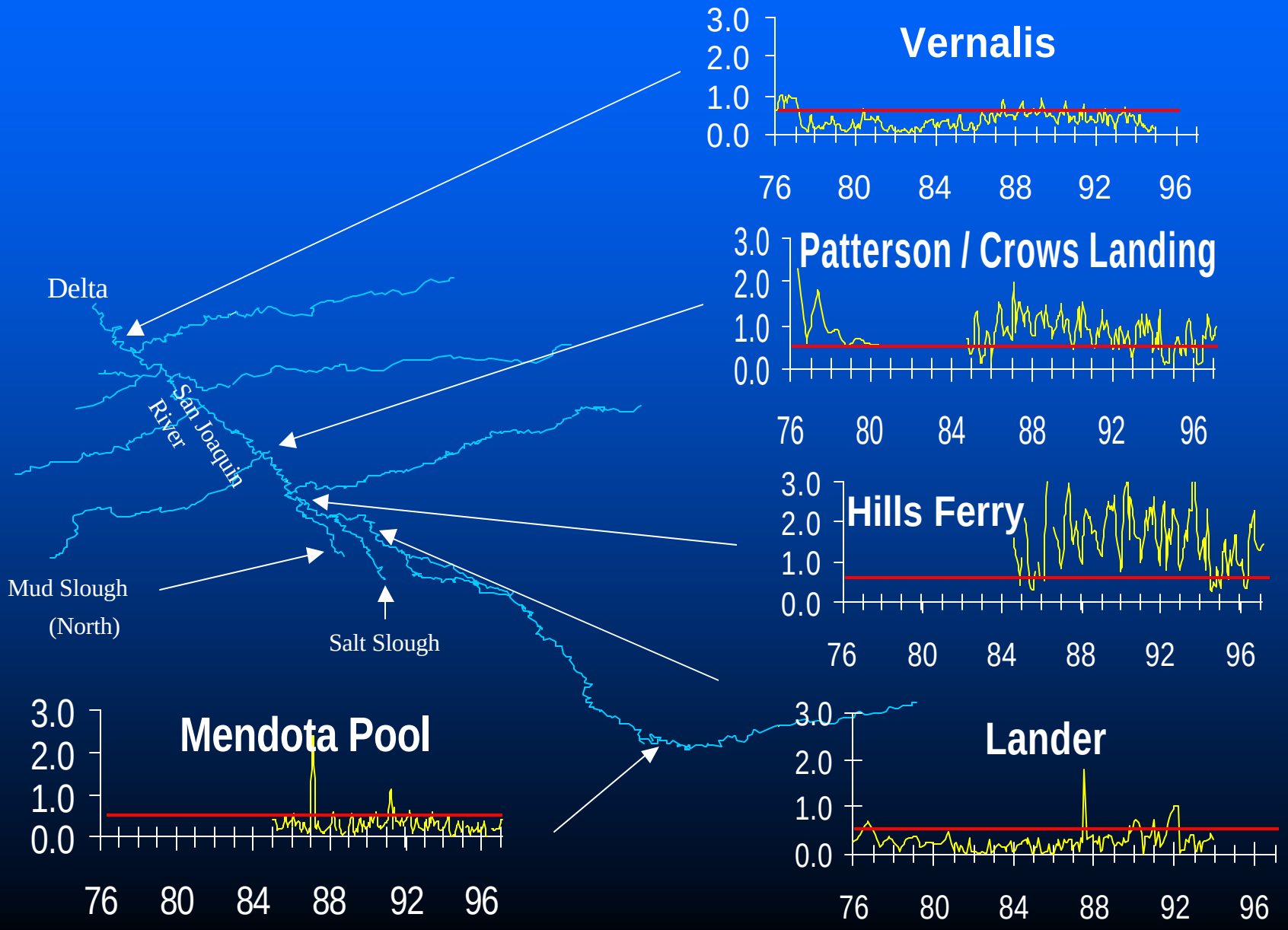
Mendota Dam to Vernalis

Four-Day Average

Year Around

0.6

Boron Full Protection Alternative



Flexibility in Setting Objectives

- Seasonal Variations
- Vary by Sections of the River
- Water Year Considerations

IMPLEMENTATION PROGRAM

Basin Plan Implementation Chapter

- Explains how the Board will conduct a program to protect water quality
- Contains time schedules
- Describes surveillance and monitoring

Watershed Approach

- Control effort will address entire watershed
- Point and nonpoint source dischargers
- Water agencies
- Groups of water agencies and other regional entities

- ROLE OF STATE AND FEDERAL AGENCIES ?

Proposed Categories of Dischargers

- Dischargers operating under WDRs
- Dischargers meeting WDR waiver conditions
  - Discharge meets receiving water standards
  - Local Management Plans approved by Board
  - Participant in Basin-wide Real Time Management Program

Total Maximum Daily Loads (TMDLs)

- Incorporated into WDRs
- Goal for management plans

Program Timetable

- Board consideration of WDRs and Management Plans within four and one half years

Incentive

- Prohibition of discharge?
- Other approaches?

Groundwater Protection

- WDRs will be required for salt/boron storage and disposal sites

Waste Discharge Requirements

- Sets limits
  - Volumes
  - Concentrations
  - Loads
  - Timing of discharge
- Time schedules
- Monitoring
- Enforceable

Proposed WDR Waiver Conditions

High Quality Discharges

- WDRs waived if no salt added and discharge meets receiving water standards

Proposed WDR Waiver Conditions

Local Management Plan

- Prepared by water agencies, groups of agencies, or others
- Requires:
  - Evaluation of control options
  - How/when changes will be made
  - Monitoring
- Board approval required
- Should qualify for Proposition 13 funds

Real Time Management Program

- Single agency
- Will be able to use assimilative capacity during high-flow conditions
- Responsible for:
  - Coordinating activities of participants
  - CEQA/WDRs
  - Identification/implementation of control measures

Total Maximum Daily Loads (TMDLs)

- Incorporated into WDRs
- Goal for management plans

Waiver of WDRs for Irrigation Return Flows (tailwater)

- Current conditions:
  - "Operating to minimize sediment to meet Basin Plan turbidity objectives and to prevent concentrations of materials toxic to fish and wildlife."
- Proposed:
  - For LSJR watershed, add conditions related to participation in (1) a local watershed effort and/or (2) an MOU to establish a real-time operation

Waiver of WDRs for Wetland Discharges

- Same as for irrigation return flows

Waiver of WDRs for Agricultural Subsurface Drainage

- WDRs already used to control selenium
- Use irrigation return flow waiver conditions for subsurface drainage in low selenium areas

Proposed Categories of Dischargers

- Dischargers operating under WDRs
- Dischargers meeting WDR waiver conditions
  - Discharge meets receiving water standards
  - Local Management Plans approved by Board
  - Participant in Basin-wide Real Time Management Program

Program Timeline

- First 18 Months
  - Conduct monitoring

Program Timeline

- Next 20 Months
  - Notify Board of intent
  - Cease discharge

  or

  - Prepare Management Plans

  or

  - Participate in development of Real-time Management Program

  or

  - Submit Report of Waste Discharge

Program Timeline

- Next 18 Months
  - Board consideration of Management Plans and WDRs

Incentive

- Prohibition of discharge?
- Other approaches?

Point Sources

- Develop salinity/boron reduction plans
- Comply with TMDLs

QUESTIONS

- Are there approaches to get involvement from:
  - Parties that divert water from the watershed
  - Parties that import salt into the watershed
- Are the timetables appropriate?
- For nonpoint source dischargers, are there incentives to participate other than a Prohibition of Discharge?

Lower San Joaquin River Basin